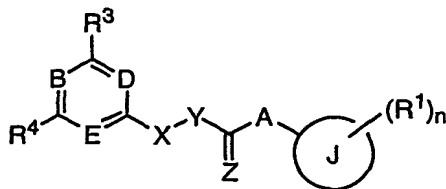


*What is claimed is:*

1. A compound according to Formula I,



I

or a pharmaceutically acceptable salt, hydrate, or prodrug thereof, wherein,

B, D, and E are each independently either =N- or =C(R<sup>2</sup>)-, provided at least one of B, D, and E is =N-;

at each occurrence, each of R<sup>1</sup>, R<sup>2</sup>, and R<sup>3</sup> is independently selected from -H, halogen, trihalomethyl, -CN, -NO<sub>2</sub>, -OR<sup>5</sup>, -N(R<sup>5</sup>)OR<sup>5</sup>, -ON(R<sup>5</sup>)R<sup>5</sup>, -N(R<sup>5</sup>)N(R<sup>5</sup>)R<sup>5</sup>, -N(R<sup>5</sup>)R<sup>5</sup>, -S(O)<sub>0-2</sub>R<sup>5</sup>, -SO<sub>2</sub>N(R<sup>5</sup>)R<sup>5</sup>, -CO<sub>2</sub>R<sup>5</sup>, -C(O)N(R<sup>5</sup>)R<sup>5</sup>, -N(R<sup>5</sup>)SO<sub>2</sub>R<sup>5</sup>, -N(R<sup>5</sup>)C(O)R<sup>5</sup>, -N(R<sup>5</sup>)CO<sub>2</sub>R<sup>5</sup>, -C(O)R<sup>5</sup>, -C(=NR<sup>7</sup>)N(R<sup>5</sup>)R<sup>5</sup>, -C(=NR<sup>7</sup>)R<sup>5</sup>, -C(=NR<sup>7</sup>)OR<sup>5</sup>, -N(R<sup>5</sup>)C(=NR<sup>7</sup>)N(R<sup>5</sup>)R<sup>5</sup>, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted aryl, optionally substituted heterocyclyl, optionally substituted heterocyclalkyl, and optionally substituted arylalkyl;

n is zero to five;

R<sup>4</sup> is selected from -H, halogen, -CN, -NO<sub>2</sub>, -N(R<sup>5</sup>)OR<sup>5</sup>, -ON(R<sup>5</sup>)R<sup>5</sup>, -N(R<sup>5</sup>)N(R<sup>5</sup>)R<sup>5</sup>, -OR<sup>5</sup>, -N(R<sup>5</sup>)R<sup>5</sup>, -S(O)<sub>0-2</sub>R<sup>5</sup>, -SO<sub>2</sub>N(R<sup>5</sup>)R<sup>5</sup>, -CO<sub>2</sub>R<sup>5</sup>, -C(O)N(R<sup>5</sup>)R<sup>5</sup>, -N(R<sup>5</sup>)SO<sub>2</sub>R<sup>5</sup>, -N(R<sup>5</sup>)C(O)R<sup>5</sup>, -N(R<sup>5</sup>)CO<sub>2</sub>R<sup>5</sup>, -C(O)R<sup>5</sup>, -C(=NR<sup>7</sup>)N(R<sup>5</sup>)R<sup>5</sup>, -C(=NR<sup>7</sup>)R<sup>5</sup>, -C(=NR<sup>7</sup>)OR<sup>5</sup>, -N(R<sup>5</sup>)C(=NR<sup>7</sup>)N(R<sup>5</sup>)R<sup>5</sup>, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted heterocyclyl, optionally substituted heterocyclalkyl, and optionally substituted arylalkyl;

R<sup>2</sup> and R<sup>3</sup>, together with the atom or atoms to which they are attached, can combine to form a three- to seven-membered optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted cycloalkyl;

$R^2$  and  $R^4$ , together with the atom or atoms to which they are attached, can combine to form a three- to seven-membered optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted cycloalkyl;

each  $R^5$  is independently selected from -H, optionally substituted lower alkyl, optionally substituted aryl, optionally substituted lower arylalkyl, optionally substituted heterocyclyl, optionally substituted lower heterocyclylalkyl, and a single bond to an atom of  $R^1$ ;

two of  $R^5$ , together with the atom or respective atoms to which they are attached, can combine to form an optionally substituted three- to seven-membered heterocyclic;

$R^5$  and  $R^6$ , together with the atom or atoms to which they are attached, can combine to form a five- to seven-membered optionally substituted heterocyclyl;

$R^5$  and  $R^7$ , together with the atom or atoms to which they are attached, can combine to form a five- to seven-membered optionally substituted heterocyclyl;

each of X and Y is independently selected from -C(=O)-, -C( $R^6$ ) $R^6$ -, -O-, -N( $R^5$ )-, -C(=NR<sup>7</sup>)-, and -S(O)<sub>0-2</sub>-; provided when X is -O- or -N( $R^5$ )-, then Y cannot be -C(H) $R^{6a}$ -, where  $R^{6a}$  is -C( $R^{20}$ )( $R^{21}$ ) $R^{22}$  wherein at least one of  $R^{20}$ ,  $R^{21}$  and  $R^{22}$  is selected from phenyl, naphthyl, cyclohexyl, dihydronaphthyl tetrahydronaphthyl, and a five- to six-membered heteroaryl, each optionally substituted;

or X and Y can combine to form either -C( $R^6$ )=C( $R^6$ )- or -C≡C-;

Z is selected from O, S, and a double bond to an atom of  $R^1$ ;

A is either -N( $R^5$ )- or a single bond;

each  $R^6$  is independently selected from -H, halogen, trihalomethyl, -CN, -NO<sub>2</sub>, -NH<sub>2</sub>, -OR<sup>5</sup>, -N( $R^5$ ) $R^5$ , -S(O)<sub>0-2</sub> $R^5$ , -SO<sub>2</sub>N( $R^5$ ) $R^5$ , -CO<sub>2</sub> $R^5$ , -C(O)N( $R^5$ ) $R^5$ , -N( $R^5$ )SO<sub>2</sub> $R^5$ , -N( $R^5$ )C(O) $R^5$ , -N( $R^5$ )CO<sub>2</sub> $R^5$ , -C(O) $R^5$ , optionally substituted lower alkyl, optionally substituted aryl, optionally substituted heterocyclyl, optionally substituted heterocyclylalkyl, optionally substituted arylalkyl, and a single bond to an atom of  $R^2$  of D or E when said either D or E is =C( $R^2$ )-

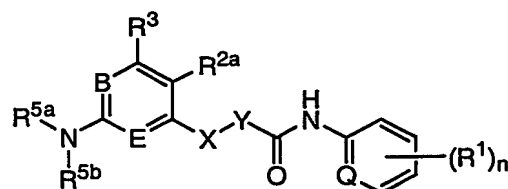
two of  $R^6$ , together with the atom or atoms to which they are attached, can combine to form one of an optionally substituted three to seven-membered alicyclic, an optionally substituted three to seven-membered heteroalicyclic, and a double bond to an atom of  $R^2$  of D or E when said either D or E is  $=C(R^2)-$ ;

each  $R^7$  is independently selected from -H, -CN, -NO<sub>2</sub>, -N( $R^5$ ) $R^5$ , -OR<sup>5</sup>, -S(O)<sub>0-2</sub> $R^5$ , -SO<sub>2</sub>N( $R^5$ ) $R^5$ , -CO<sub>2</sub> $R^5$ , optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, and a single bond to a carbon of J; and

J is selected from an optionally substituted five- to ten-membered aryl and an optionally substituted five- to ten-membered heteroaryl;

provided the compound is not one of: 2-(2-amino-5-cyano-6-methylsulfanyl-pyrimidin-4-ylsulfanyl)-N-(3-trifluoromethyl-phenyl)-acetamide, 2-([2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio)-N-[3-(butyloxy)phenyl]acetamide, 2-([2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio)-N-1,3-benzothiazol-2-ylacetamide, 2-([2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio)-N-(5-ethyl-1,3,4-thiadiazol-2-yl)acetamide, 2-([2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio)-N-(4-methyl-1,3-thiazol-2-yl)acetamide, 2-amino-4-([2-(3,5-dimethyl-1H-pyrazol-1-yl)-2-oxoethyl]thio)-6-(methylthio)pyrimidine-5-carbonitrile, 2-([2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio)-N-1,3-thiazol-2-ylacetamide, 2-(5-cyano-2-methylsulfanyl-pyrimidin-4-ylsulfanyl)-N-phenyl-acetamide, 5-amino-2-methylsulfanyl-thieno[2,3-d]pyrimidine-6-carboxylic acid phenylamide, 2-(6-amino-5-cyano-2-methylsulfanyl-pyrimidin-4-ylsulfanyl)-N-phenyl-acetamide, 4,5-diamino-2-(2-methoxy-ethoxy)-thieno[2,3-d]pyrimidine-6-carboxylic acid phenylamide, 2-(5-cyano-6-phenyl-2-phenylcarbamoylmethylsulfanyl-pyrimidin-4-ylsulfanyl)-N-phenyl-acetamide, and a 2-(6-amino-3,5-dicyano-pyridin-2-ylsulfanyl)-N-phenyl-acetamide derivative.

2. The compound according to claim 1, wherein J is either a six-membered aryl or a five- to six-membered heteroaryl.
3. The compound according to claim 2, wherein D is  $=C(R^2)-$ .
4. The compound according to claim 3, wherein  $R^4$  is -N( $R^5$ ) $R^5$ .
5. The compound according to claim 4, of Formula II,

**II**

wherein,  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^5$ ,  $n$ ,  $B$ ,  $E$ ,  $X$ , and  $Y$  are as defined above; and  $Q$  is either  $=N-$  or  $=C(H)-$ .

6. The compound according to claim 5, wherein  $R^{2a}$  is selected from halogen,  $-CN$ ,  $-C(=O)N(R^5)R^5$ ,  $-CF_3$ ,  $-CO_2R^5$ ,  $-C(R^5)=C(R^5)R^5$ ,  $-C\equiv C-R^5$ , and  $-NO_2$ ;

7. The compound according to claim 6, wherein at least one of  $R^{5a}$  and  $R^{5b}$  is  $-H$ .

8. The compound according to claim 7, wherein  $R^3$  is selected from  $-OR^5$ ,  $-NR^5R^5$ , and  $-S(O)_{0-2}R^5$ .

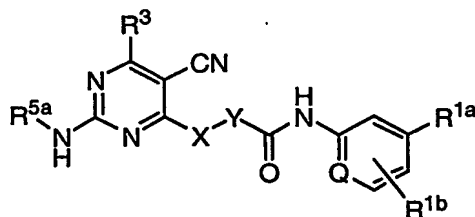
9. The compound according to claim 8, wherein at least one of  $B$  and  $E$  is  $=N-$ .

10. The compound according to claim 9, wherein  $R^1$  is selected from halogen,  $-OR^5$ ,  $-NR^5R^5$ ,  $-S(O)_{0-2}R^5$ ,  $-NO_2$ , perhaloalkyl, optionally substituted lower alkyl, optionally substituted aryl, and optionally substituted arylalkyl.

11. The compound according to claim 10, wherein  $R^1$  is selected from halogen,  $-OR^5$ ,  $-NR^5R^5$ ,  $-S(O)_{0-1}R^5$ ,  $-NO_2$ , perhaloalkyl, and optionally substituted lower alkyl.

12. The compound according to claim 11, wherein  $A$  is  $-N(R^5)-$ .

13. The compound according to claim 12, of Formula **III**,

**III**

wherein,  $R^3$ ,  $R^5$ , X, Y, and Q are as defined above;  $R^{1a}$  is selected from halogen, lower perfluoroalkyl,  $-NO_2$ ,  $-OR^5$ , and optionally substituted  $C_{1-4}$ alkyl; and  $R^{1b}$  is selected from halogen,  $-OR^5$ ,  $-N(R^5)R^5$ ,  $-SR^5$ , perfluoroalkyl, and optionally substituted lower alkyl.

14. The compound according to claim 13, wherein  $R^{1a}$  is selected from  $-NO_2$ , halogen, perfluoroalkyl, haloalkyl, optionally substituted  $C_{1-2}$ alkyl, and optionally substituted  $-O-C_{1-2}$ alkyl.

15. The compound according to claim 14, wherein  $R^3$  is selected from optionally substituted  $-O-C_{1-4}$ alkyl,  $-O-C_{1-4}$ perfluoroalkyl, optionally substituted  $-N(H)C_{1-4}$ alkyl, optionally substituted  $-N(C_{1-4}alkyl)C_{1-4}alkyl$ , optionally substituted  $-S(O)_{0-2}-C_{1-4}alkyl$ , and optionally substituted  $-S(O)_{0-2}-C_{1-4}perfluoroalkyl$ .

16. The compound according to claim 15, wherein Y is either  $-N(H)-$  or  $-C(R^6)R^6-$ .

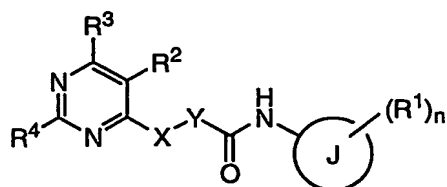
17. The compound according to claim 16, wherein X is selected from  $-O-$ ,  $-N(R^5)-$  and  $-S-$ .

18. The compound according to claim 17, wherein Y is  $-C(R^6)R^6-$ ; wherein each  $R^6$  is independently selected from  $-H$ , halogen, trihalomethyl,  $-NH_2$ , optionally substituted  $-O-C_{1-4}alkyl$ , optionally substituted  $-N(H)C_{1-4}alkyl$ , optionally substituted  $-S-C_{1-4}alkyl$ , optionally substituted lower alkyl, optionally substituted heterocyclyl, and optionally substituted heterocyclylalkyl.

19. The compound according to claim 18, wherein Y is  $-C(H)R^6-$ ; wherein  $R^6$  is independently selected from  $-H$ , halogen, trihalomethyl,  $-NH_2$ , optionally substituted  $-O-C_{1-4}alkyl$ , optionally substituted  $-N(H)C_{1-4}alkyl$ , optionally substituted  $-S-C_{1-4}alkyl$ , optionally substituted lower alkyl, optionally substituted heterocyclyl, and optionally substituted heterocyclylalkyl.

20. The compound according to claim 19, wherein Q is  $=C(H)-$ .

21. A compound according to Formula IV,



## IV

or a pharmaceutically acceptable salt, hydrate, or prodrug thereof, wherein,

$R^1$  is selected from halogen,  $-OR^5$ ,  $-N(R^5)R^5$ ,  $-S(O)_{0-2}R^5$ ,  $-NO_2$ ,  $-C(O)R^5$ , perhaloalkyl, optionally substituted lower alkyl, optionally substituted aryl, and optionally substituted arylalkyl.

$n$  is zero to five;

$R^2$  is selected from halogen,  $-CN$ ,  $-C(=O)N(R^5)R^5$ ,  $-CF_3$ ,  $-CO_2R^5$ ,  $-C(R^5)=C(R^5)R^5$ ,  $-C\equiv C-R^5$ , and  $-NO_2$ ;

$R^3$  is selected from  $-H$ , halogen, trihalomethyl,  $-CN$ ,  $-NO_2$ ,  $-OR^5$ ,  $-N(R^5)OR^5$ ,  $-ON(R^5)R^5$ ,  $-N(R^5)N(R^5)R^5$ ,  $-N(R^5)R^5$ ,  $-S(O)_{0-2}R^5$ ,  $-SO_2N(R^5)R^5$ ,  $-CO_2R^5$ ,  $-C(O)N(R^5)R^5$ ,  $-N(R^5)SO_2R^5$ ,  $-N(R^5)C(O)R^5$ ,  $-N(R^5)CO_2R^5$ ,  $-C(O)R^5$ ,  $-C(=NR^7)N(R^5)R^5$ ,  $-C(=NR^7)R^5$ ,  $-C(=NR^7)OR^5$ ,  $-N(R^5)C(=NR^7)N(R^5)R^5$ , optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted aryl, optionally substituted heterocyclyl, optionally substituted heterocyclylalkyl, and optionally substituted arylalkyl;

$R^4$  is selected from  $-CN$ , halogen,  $-NO_2$ ,  $-N(R^5)OR^5$ ,  $-ON(R^5)R^5$ ,  $-N(R^5)N(R^5)R^5$ ,  $-OR^5$ ,  $-N(R^5)R^5$ ,  $-SO_2N(R^5)R^5$ ,  $-C(O)N(R^5)R^5$ ,  $-C(=NR^7)N(R^5)R^5$ ,  $-C(=NR^7)R^5$ ,  $-C(=NR^7)OR^5$ ,  $-N(R^5)C(=NR^7)N(R^5)R^5$ , optionally substituted lower alkyl, optionally substituted heterocyclyl, and optionally substituted heterocyclylalkyl;

each  $R^5$  is independently selected from  $-H$ , optionally substituted lower alkyl, optionally substituted aryl, optionally substituted lower arylalkyl, optionally substituted heterocyclyl, and optionally substituted lower heterocyclylalkyl;

two of  $R^5$ , together with the atom or respective atoms to which they are attached, can combine to form an optionally substituted three- to seven-membered heterocyclic;

$R^5$  and  $R^6$ , together with the atom or atoms to which they are attached, can combine to form a five- to seven-membered optionally substituted heterocyclyl;

$R^5$  and  $R^7$ , together with the atom or atoms to which they are attached, can combine to form a five- to seven-membered optionally substituted heterocyclyl;

each of X and Y is independently selected from  $-C(=O)-$ ,  $-C(R^6)R^6-$ ,  $-O-$ ,  $-N(R^5)-$ ,  $-C(=NR^7)-$ , and  $-S(O)_{0-2}-$ ; provided when X is  $-O-$  or  $-N(R^5)-$ , then Y cannot be  $-C(H)R^{6a}-$ , where  $R^{6a}$  is  $-C(R^{20})(R^{21})R^{22}$  wherein at least one of  $R^{20}$ ,  $R^{21}$  and  $R^{22}$  is selected from phenyl, naphthyl, cyclohexyl, dihydronaphthyl tetrahydronaphthyl, and a five- to six-membered heteroaryl, each optionally substituted;

or X and Y can combine to form either  $-C(R^6)=C(R^6)-$  or  $-C\equiv C-$ ;

each  $R^6$  is independently selected from  $-H$ , halogen, trihalomethyl,  $-CN$ ,  $-NO_2$ ,  $-NH_2$ ,  $-OR^5$ ,  $-N(R^5)R^5$ ,  $-S(O)_{0-2}R^5$ ,  $-SO_2N(R^5)R^5$ ,  $-CO_2R^5$ ,  $-C(O)N(R^5)R^5$ ,  $-N(R^5)SO_2R^5$ ,  $-N(R^5)C(O)R^5$ ,  $-N(R^5)CO_2R^5$ ,  $-C(O)R^5$ , optionally substituted lower alkyl, optionally substituted aryl, optionally substituted heterocyclyl, optionally substituted heterocyclylalkyl, optionally substituted arylalkyl, and a single bond to an atom of  $R^1$ ;

two of  $R^6$ , together with the atom or atoms to which they are attached, can combine to form either an optionally substituted three to seven-membered alicyclic or an optionally substituted three to seven-membered heteroalicyclic;

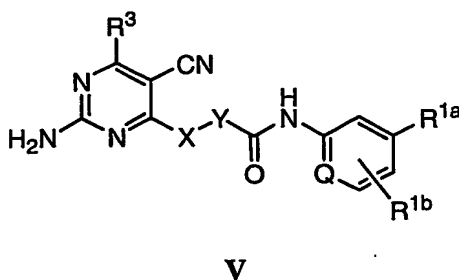
each  $R^7$  is independently selected from  $-H$ ,  $-CN$ ,  $-NO_2$ ,  $-N(R^5)R^5$ ,  $-OR^5$ ,  $-S(O)_{0-2}R^5$ ,  $-SO_2N(R^5)R^5$ ,  $-CO_2R^5$ , optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, and a single bond to a carbon of J; and

J is selected from an optionally substituted five- to ten-membered aryl and an optionally substituted five- to ten-membered heteroaryl;

provided the compound is not one of: 2-(2-amino-5-cyano-6-methylsulfanyl-pyrimidin-4-ylsulfanyl)-N-(3-trifluoromethyl-phenyl)-acetamide, 2-([2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio)-N-[3-(butyloxy)phenyl]acetamide, 2-([2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio)-N-1,3-benzothiazol-2-ylacetamide, 2-([2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio)-N-(5-ethyl-1,3,4-thiadiazol-2-yl)acetamide, 2-([2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio)-N-(4-methyl-1,3-thiazol-2-yl)acetamide, 2-amino-4-{[2-(3,5-dimethyl-1H-pyrazol-1-yl)-2-oxoethyl]thio}-6-(methylthio)pyrimidine-5-carbonitrile, 2-([2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio)-N-1,3-thiazol-2-ylacetamide, 2-(5-cyano-2-methylsulfanyl-pyrimidin-4-ylsulfanyl)-N-phenyl-acetamide, 5-amino-2-methylsulfanyl-thieno[2,3-d]pyrimidine-

6-carboxylic acid phenylamide, 2-(6-amino-5-cyano-2-methylsulfanyl-pyrimidin-4-ylsulfanyl)-N-phenyl-acetamide, 4,5-diamino-2-(2-methoxy-ethoxy)-thieno[2,3-d]pyrimidine-6-carboxylic acid phenylamide, 2-(5-cyano-6-phenyl-2-phenylcarbamoylemethylsulfanyl-pyrimidin-4-ylsulfanyl)-N-phenyl-acetamide, and a 2-(6-amino-3,5-dicyano-pyridin-2-ylsulfanyl)-N-phenyl-acetamide derivative.

22. The compound according to claim 21, wherein  $R^4$  is  $-NR^{5a}R^{5b}$ ; wherein at least one of  $R^{5a}$  and  $R^{5b}$  is  $-H$ .
23. The compound according to claim 22, wherein  $X$  is selected from  $-O-$ ,  $-N(R^5)-$ , and  $-S(O)_{0-2}-$ .
24. The compound according to claim 23, wherein  $Y$  is either  $-C(R^6)R^6-$  or  $-N(R^5)-$ .
25. The compound according to claim 24, wherein  $J$  is either phenyl or pyridyl.
26. The compound according to claim 25, wherein  $R^4$  is  $-NH_2$ .
27. The compound according to claim 26, wherein at least one of  $R^1$  is selected from halo,  $-NO_2$ ,  $-OR^5$ , perfluoroalkyl, haloalkyl, and optionally substituted  $C_{1-4}$ alkyl.
28. The compound according to claim 27, of Formula V,



wherein  $R^1$ ,  $R^3$ ,  $X$ , and  $Y$  are as defined above; and  $Q$  is either  $=N-$  or  $=C(H)-$ .

29. The compound according to claim 28, wherein  $R^{1a}$  is selected from halo, lower perfluoroalkyl,  $-NO_2$ , optionally substituted  $-O-C_{1-4}$ alkyl, and optionally substituted  $C_{1-4}$ alkyl.
30. The compound according to claim 29, wherein  $R^3$  is selected from optionally substituted  $-O-C_{1-4}$ alkyl,  $-O-C_{1-4}$ perfluoroalkyl, optionally substituted  $-N(H)C_{1-4}$ alkyl, optionally substituted  $-N(C_{1-4}alkyl)C_{1-4}alkyl$ , optionally substituted  $-S(O)_{0-2}-C_{1-4}alkyl$ , and optionally substituted  $-S(O)_{0-2}-C_{1-4}$ perfluoroalkyl.



31. The compound according to claim 30, wherein Y is  $-C(R^6)R^6-$ ; wherein each  $R^6$  is independently selected from -H, halogen, trihalomethyl,  $-NH_2$ , optionally substituted  $-O-C_{1-4}$ alkyl, optionally substituted  $-N(H)C_{1-4}$ alkyl, optionally substituted  $-S-C_{1-4}$ alkyl, optionally substituted lower alkyl, optionally substituted heterocyclyl, and optionally substituted heterocyclylalkyl.

32. The compound according to claim 31, wherein Y is  $-C(H)R^6-$ ; wherein  $R^6$  is independently selected from -H, halogen, trihalomethyl,  $-NH_2$ , optionally substituted  $-O-C_{1-4}$ alkyl, optionally substituted  $-N(H)C_{1-4}$ alkyl, optionally substituted  $-S-C_{1-4}$ alkyl, optionally substituted lower alkyl, optionally substituted heterocyclyl, and optionally substituted heterocyclylalkyl.

33. The compound according to claim 32, wherein Q is  $=C(H)-$ .

34. The compound according to claim 1, selected from Table 3.

**Table 3**

Entry	Name	Structure
1	2-[(3-cyano-4,6-dimethyl-5-nitropyridin-2-yl)oxy]-N-[3-(trifluoromethyl)phenyl]acetamide	
2	N-2-(2-amino-6-chloropyrimidin-4-yl)-N-[3-(trifluoromethyl)phenyl]glycinamide	
3	[2-amino-6-(methylthio)pyrimidin-4-yl]methyl [3-(trifluoromethyl)phenyl]carbamate	

Table 3

Entry	Name	Structure
4	2-[[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio]-N-[5-(trifluoromethyl)pyridin-2-yl]acetamide	
5	N-2-[2-amino-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]glycinamide	
6	2-[[2-amino-6-(methylthio)pyrimidin-4-yl]oxy]-N-[3-(trifluoromethyl)phenyl]acetamide	
7	2-[[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio]-N-[3-(methyloxy)phenyl]acetamide	
8	N-2-(2-amino-6-morpholin-4-ylpyrimidin-4-yl)-N-[3-(trifluoromethyl)phenyl]glycinamide	
9	2-[[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio]-N-(4-chlorophenyl)acetamide	

Table 3

Entry	Name	Structure
10	2-{[2-amino-6-(1H-1,2,3-benzotriazol-1-yloxy)pyrimidin-4-yl]thio}-N-[3-(trifluoromethyl)phenyl]acetamide	
11	2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-(3-chlorophenyl)acetamide	
12	N-2-(2-amino-6-chloro-5-formylpyrimidin-4-yl)-N-[3-(trifluoromethyl)phenyl]glycinamide	
13	N-2-[2-amino-5-formyl-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]glycinamide	
14	2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]oxy}-N-[3-(trifluoromethyl)phenyl]acetamide	
15	2-[(2-amino-6-chloropyrimidin-4-yl)thio]-N-[3-(trifluoromethyl)phenyl]acetamide	

Table 3

Entry	Name	Structure
16	2-[[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio]-N-methyl-N-[3-(trifluoromethyl)phenyl]acetamide	
17	N-2-[4-amino-6-(methylthio)-1,3,5-triazin-2-yl]-N-[3-(trifluoromethyl)phenyl]glycinamide	
18	N-2-[4-(dimethylamino)-6-(methylthio)-1,3,5-triazin-2-yl]-N-[3-(trifluoromethyl)phenyl]glycinamide	
19	N-2-[4-(methylamino)-6-(methylthio)-1,3,5-triazin-2-yl]-N-[3-(trifluoromethyl)phenyl]glycinamide	
20	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]glycinamide	
21	2-[[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio]-N-[3-(trifluoromethyl)phenyl]acetamide	

Table 3

Entry	Name	Structure
22	'2-[[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio]-N-[3-(butyloxy)phenyl]acetamide	
23	'2-[[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio]-N-1,3-benzothiazol-2-ylacetamide	
24	'2-[[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio]-N-(5-ethyl-1,3,4-thiadiazol-2-yl)acetamide	
25	'2-[[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio]-N-(4-methyl-1,3-thiazol-2-yl)acetamide	
26	'2-amino-4-[[2-(3,5-dimethyl-1H-pyrazol-1-yl)-2-oxoethyl]thio]-6-(methylthio)pyrimidine-5-carbonitrile	
27	'2-[[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio]-N-1,3-thiazol-2-ylacetamide	
28	ethyl 5-[[([2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio)acetyl]amino]-4-cyano-3-methylthiophene-2-carboxylate	

Table 3

Entry	Name	Structure
29	2-([2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio)-N-pyridin-2-ylacetamide	
30	2-amino-4-([2-[2,5-bis(methyloxy)phenyl]-2-oxoethyl]thio)-6-(methylthio)pyrimidine-5-carbonitrile	
31	2-([2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio)-N-[4-fluoro-3-(trifluoromethyl)phenyl]acetamide	
32	2-[(2,6-diaminopyrimidin-4-yl)thio]-N-[4-fluoro-3-(trifluoromethyl)phenyl]acetamide	
33	2-[(2,6-diaminopyrimidin-4-yl)thio]-N-[3-(trifluoromethyl)phenyl]acetamide	
34	2-([2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio)-N-[4-chloro-3-(trifluoromethyl)phenyl]acetamide	

Table 3

Entry	Name	Structure
35	2-amino-4-(methylthio)-6-({2-oxo-1-[3-(trifluoromethyl)phenyl]pyrrolidin-3-yl}thio)pyrimidine-5-carbonitrile	
36	2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-[6-(trifluoromethyl)pyridin-2-yl]acetamide	
37	2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-[4-(trifluoromethyl)pyridin-2-yl]acetamide	
38	{6-(methylthio)-2-[(phenylmethyl)amino]pyrimidin-4-yl}methyl [3-(trifluoromethyl)phenyl]carbamate	
39	[6-(methylamino)-2-(methylthio)pyrimidin-4-yl]methyl [3-(trifluoromethyl)phenyl]carbamate	
40	{2-(methylthio)-6-[(phenylmethyl)amino]pyrimidin-4-yl}methyl [3-(trifluoromethyl)phenyl]carbamate	

Table 3

Entry	Name	Structure
41	2-{{2-(acetylamino)-5-cyano-6-(methylthio)pyrimidin-4-yl}thio}-N-[3-(trifluoromethyl)phenyl]acetamide	
42	(2S)-2-{{2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl}oxy}-N-[3-(trifluoromethyl)phenyl]propanamide	
43	2-{{2-amino-6-chloro-5-formylpyrimidin-4-yl}thio}-N-[3-(trifluoromethyl)phenyl]acetamide	
44	N-2-{{2-amino-5-(hydroxymethyl)-6-(methylthio)pyrimidin-4-yl}-N-[3-(trifluoromethyl)phenyl]glycinamide	
45	2-{{2-amino-5-formyl-6-(methylamino)pyrimidin-4-yl}thio}-N-[3-(trifluoromethyl)phenyl]acetamide	
46	2-{{2-amino-5-formyl-6-(methylthio)pyrimidin-4-yl}oxy}-N-[3-(trifluoromethyl)phenyl]acetamide	



Table 3

Entry	Name	Structure
47	2-[[4-amino-6-(methylthio)-1,3,5-triazin-2-yl]oxy]-N-[3-(trifluoromethyl)phenyl]acetamide	
48	2-[[2-amino-6-(methylthio)pyrimidin-4-yl]thio]-N-[3-(trifluoromethyl)phenyl]acetamide	
49	2-amino-4-(methylthio)-6-[[2-oxo-2-(3-oxo-3,4-dihydro-2H-1,4-benzoxazin-6-yl)ethyl]thio]pyrimidine-5-carbonitrile	
50	2-[(2-amino-6-chloro-5-formylpyrimidin-4-yl)oxy]-N-[3-(trifluoromethyl)phenyl]acetamide	
51	2-[[2-amino-5-formyl-6-(phenylthio)pyrimidin-4-yl]thio]-N-[3-(trifluoromethyl)phenyl]acetamide	
52	2-[[2-amino-5-(hydroxymethyl)-6-(phenylthio)pyrimidin-4-yl]thio]-N-[3-(trifluoromethyl)phenyl]acetamide	
53	2-[[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio]-N-[2-methyl-3-(trifluoromethyl)phenyl]acetamide	

Table 3

Entry	Name	Structure
54	2-{{2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl}thio}-N-[2-(methyloxy)-5-(trifluoromethyl)phenyl]acetamide	
55	2-{{2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl}thio}-N-[2-chloro-5-(trifluoromethyl)phenyl]acetamide	
56	2-{{2-amino-5-(hydroxymethyl)-6-(methylthio)pyrimidin-4-yl}oxy}-N-[3-(trifluoromethyl)phenyl]acetamide	
57	N-2-(6-amino-1H-pyrazolo[3,4-d]pyrimidin-4-yl)-N-[3-(trifluoromethyl)phenyl]glycinamide	
58	N-2-[2-amino-5-[(E)-hydrazonomethyl]-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]glycinamide	
59	N-2-[2-amino-5-[(E)-hydroxyimino)methyl]-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]glycinamide	

Table 3

Entry	Name	Structure
60	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
61	2-{[2-amino-5-cyano-6-(methylamino)pyrimidin-4-yl]thio}-N-[3-(trifluoromethyl)phenyl]acetamide	
62	2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-[2-amino-5-(trifluoromethyl)phenyl]acetamide	
63	2-amino-4-(methylthio)-6-({[6-(trifluoromethyl)-1H-benzimidazol-2-yl]methyl}thio)pyrimidine-5-carbonitrile	
64	2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]hydrazinecarboxamide	
65	N-2-[5-cyano-2-(methylamino)-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]glycinamide	

Table 3

Entry	Name	Structure
66	2-{[2-amino-5-cyano-6-(dimethylamino)pyrimidin-4-yl]thio}-N-[3-(trifluoromethyl)phenyl]acetamide	
67	(S)-1-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]prolinamide	
68	(2R)-2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]oxy}-N-[3-(trifluoromethyl)phenyl]propanamide	
69	1-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]oxy}-N-[3-(trifluoromethyl)phenyl]cyclopropane carboxamide	
70	(2S)-2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]oxy}-3-methyl-N-[3-(trifluoromethyl)phenyl]butanamide	
71	N-2-[5-cyano-2-(dimethylamino)-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]glycinamide	

Table 3

Entry	Name	Structure
72	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-2-methyl-N-[3-(trifluoromethyl)phenyl]glycinamide	
73	1-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]amino}-N-[3-(trifluoromethyl)phenyl]cyclopropane carboxamide	
74	N-2-[2-amino-5-cyano-6-(methylsulfinyl)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
75	N-2-[2-amino-5-cyano-6-(methylsulfonyl)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
76	N-2-(5-cyano-2-morpholin-4-ylpyrimidin-4-yl)-N-[3-(trifluoromethyl)phenyl]glycinamide	
77	2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-[3,5-bis(trifluoromethyl)phenyl]acetamide	

Table 3

Entry	Name	Structure
78	N-2-[2-amino-5-cyano-6-(methyloxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
79	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[2-(methyloxy)-5-(trifluoromethyl)phenyl]-L-alaninamide	
80	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[2-chloro-5-(trifluoromethyl)phenyl]-L-alaninamide	
81	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-2-methyl-N-[3-(trifluoromethyl)phenyl]alaninamide	
82	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-{3-[(4-methylpiperazin-1-yl)carbonyl]phenyl}-L-alaninamide	
83	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-D-alaninamide	

Table 3

Entry	Name	Structure
84	2-[(2-amino-5-cyano-6-morpholin-4-yl)pyrimidin-4-ylthio]-N-[3-(trifluoromethyl)phenyl]acetamide	
85	(R)-1-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]prolinamide	
86	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	
87	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-2-[2-(dimethylamino)ethyl]-N-[3-(trifluoromethyl)phenyl]glycinamide	
88	N-2-[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
89	N-2-(2,6-diamino-5-cyanopyrimidin-4-yl)-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	

Table 3

Entry	Name	Structure
90	N-2-(2-amino-5-cyanopyrimidin-4-yl)-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
91	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-2-methyl-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
92	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-(3-{[2-(diethylamino)ethyl]oxy}phenyl)-L-alaninamide	
93	2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-1,2-dimethyl-N-[3-(trifluoromethyl)phenyl]hydrazinecarboxamide	
94	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-amino-5-(trifluoromethyl)phenyl]-L-alaninamide	
95	ethyl [1-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-2-({[3-(trifluoromethyl)phenyl]amino}carbonyl)hydrazino]acetate	



Table 3

Entry	Name	Structure
96	2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-2-methyl-N-[3-(trifluoromethyl)phenyl]hydrazinecarboxamide	
97	3,5-diamino-4,6-dimethyl-N-[3-(trifluoromethyl)phenyl]furo[2,3-b]pyridine-2-carboxamide	
98	3-amino-4,6-dimethyl-5-nitro-N-[3-(trifluoromethyl)phenyl]furo[2,3-b]pyridine-2-carboxamide	
99	N-2-(2-amino-5-cyano-6-hydroxypyrimidin-4-yl)-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
100	N-2-[5-cyano-2-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]glycinamide	
101	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-2-(tetrahydro-2H-pyran-4-ylmethyl)-N-[3-(trifluoromethyl)phenyl]glycinamide	

Table 3

Entry	Name	Structure
102	N-2-(2-amino-5-cyano-6-[[2-(dimethylamino)ethyl]oxy]pyrimidin-4-yl)-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
103	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-6-[[[(1,1-dimethylethyl)oxy]carbonyl]-N-[3-(trifluoromethyl)phenyl]-L-lysine]	
104	2-amino-4-(methylthio)-6-(methyl((1S)-1-[6-(trifluoromethyl)-1H-benzimidazol-2-yl]ethyl)amino)pyrimidine-5-carbonitrile	
105	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-2-[2-(tetrahydro-2H-pyran-4-yl)ethyl]-N-[3-(trifluoromethyl)phenyl]glycinamide	
106	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-3-[[2-(diethylamino)ethyl]amino]-5-(trifluoromethyl)phenyl]-L-alaninamide	

Table 3

Entry	Name	Structure
107	2-amino-4-(methylthio)-6-(((1S)-1-[6-(trifluoromethyl)-1H-benzimidazol-2-yl]ethyl)amino)pyrimidine-5-carbonitrile	
108	2-[2-amino-5-cyano-6-[1-(3-trifluoromethyl-phenylcarbamoyl)-1S-ethylamino]-pyrimidin-4-ylamino]-N-(3-trifluoromethyl-phenyl)-2S-propionamide	
109	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-2-methyl-N-(3-methylphenyl)glycinamide	
110	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-2-methyl-N-[3-(1-methylethyl)phenyl]glycinamide	
111	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-5-[imino(nitroamino)methyl]-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	
112	methyl 3-((N-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-L-alanyl)amino)-5-(trifluoromethyl)benzoate	

Table 3

Entry	Name	Structure
113	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-(3-nitrophenyl)-L-alaninamide	
114	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-lysινamide	
115	N-2-[2-amino-5-cyano-6-(propyloxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
116	N-2-[5-cyano-2-[(2-(methyloxy)ethyl)amino]-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
117	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-argininamide	
118	N-2-[2-amino-5-cyano-6-(methylsulfinyl)pyrimidin-4-yl]-N-2-methyl-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	

Table 3

Entry	Name	Structure
119	N-2-[2-amino-5-cyano-6-(methyloxy)pyrimidin-4-yl]-N-2-methyl-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
120	N-2-[2-amino-5-cyano-6-(propyloxy)pyrimidin-4-yl]-N-2-methyl-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
121	N-2-[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N-2-methyl-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
122	N-2-[2-amino-5-cyano-6-[(1-methylethyl)oxy]pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
123	N-5-acetyl-N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	
124	N-2-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-(3-aminophenyl)-L-alaninamide	

Table 3

Entry	Name	Structure
125	3-({N-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-L-alanyl}amino)-N-[2-(dimethylamino)ethyl]-5-(trifluoromethyl)benzamide	
126	2-(methyloxy)ethyl ((4S)-4-[[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]amino]-5-oxo-5-[[3-(trifluoromethyl)phenyl]amino]pentyl)carbamate	
127	2-[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]hydrazinecarboxamide	
128	1,1-dimethylethyl ((4S)-4-[[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]amino]-5-oxo-5-[[3-(trifluoromethyl)phenyl]amino]pentyl)carbamate	
129	N-2-[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	

Table 3

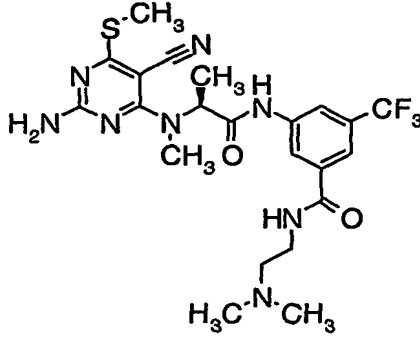
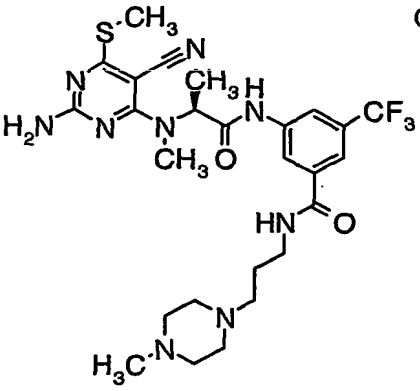
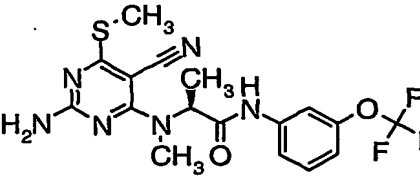
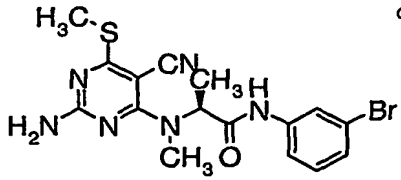
Entry	Name	Structure
130	3-((N-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-methyl-L-alanyl)amino)-N-[2-(dimethylamino)ethyl]-5-(trifluoromethyl)benzamide	 <p>Chiral</p>
131	3-((N-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-methyl-L-alanyl)amino)-N-[3-(4-methylpiperazin-1-yl)propyl]-5-(trifluoromethyl)benzamide	 <p>Chiral</p>
132	N~2~-2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N~2~-methyl-N-[3-[(trifluoromethyl)oxy]phenyl]-L-alaninamide	 <p>Chiral</p>
133	N~2~-2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-(3-bromophenyl)-N~2~-methyl-L-alaninamide	 <p>Chiral</p>

Table 3

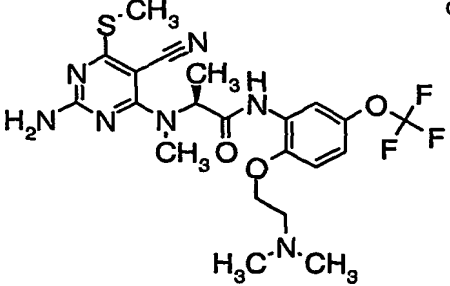
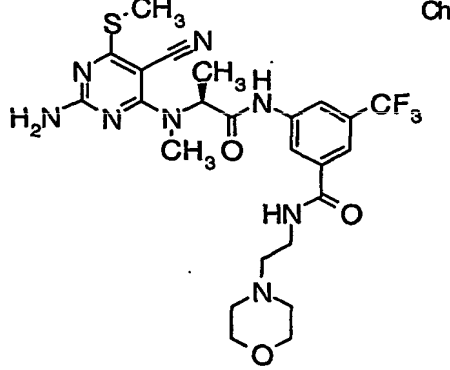
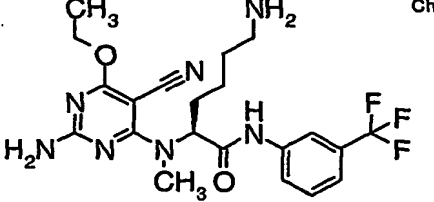
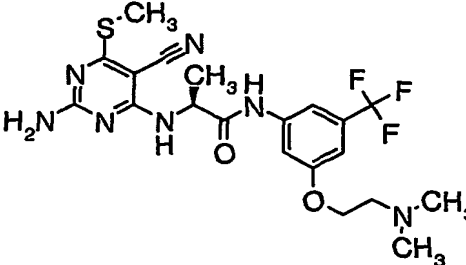
Entry	Name	Structure
134	N~2~-{2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl}-N-{2-[(2-(dimethylamino)ethyl)oxy]-5-[(trifluoromethyl)oxy]phenyl}-N~2~-methyl-L-alaninamide	 <p style="text-align: right;">Chiral</p>
135	3-({N-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-methyl-L-alanyl}amino)-N-(2-morpholin-4-ylethyl)-5-(trifluoromethyl)benzamide	 <p style="text-align: right;">Chiral</p>
136	N~2~-{2-amino-5-cyano-6-(ethoxy)pyrimidin-4-yl}-N~2~-methyl-N-[3-(trifluoromethyl)phenyl]-L-lysινamide	 <p style="text-align: right;">Chiral</p>
137	N~2~-{2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl}-N-[3-[(2-(dimethylamino)ethyl)oxy]-5-(trifluoromethyl)phenyl]-L-alaninamide	 <p style="text-align: right;">Chiral</p>



Table 3

Entry	Name	Structure
138	(2S)-2-[[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]amino]-3-oxo-3-[[3-(trifluoromethyl)phenyl]amino]propyl acetate	
139	N-2--[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-1--[3-(trifluoromethyl)phenyl]-L-glutamamide	
140	2-[2-amino-5-cyano-6-(methyloxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]hydrazinecarboxamide	
141	3-((N-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-L-alanyl)amino)-N-hydroxy-5-(trifluoromethyl)benzamide	
142	N-2--[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-3-(dimethylamino)-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	

Table 3

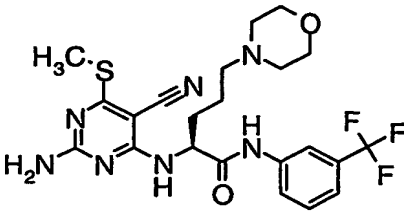
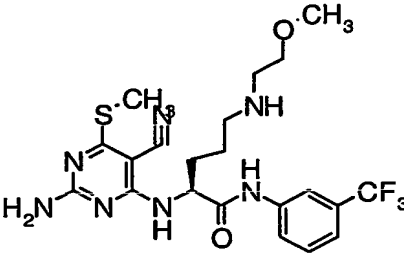
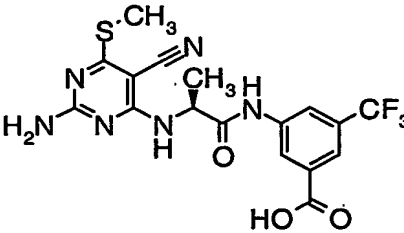
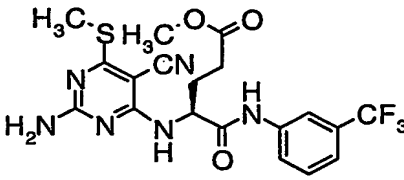
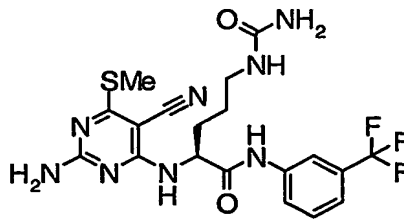
Entry	Name	Structure
143	N~2~- [2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-5-morpholin-4-yl-N-[3-(trifluoromethyl)phenyl]-L-norvalinamide	
144	N~2~- [2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N~5~- [2-(methyloxy)ethyl]-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	
145	3-((N-[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-L-alanyl)amino)-5-(trifluoromethyl)benzoic acid	
146	methyl N~2~- [2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-alpha-glutamate	
147	N~5~- (aminocarbonyl)-N~2~- [2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	

Table 3

Entry	Name	Structure
148	N~2~-~[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	
149	N~2~-~[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-alpha-glutamine	
150	N~2~-~[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-serinamide	
151	N~2~-~[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-O-(phenylmethyl)-N-[3-(trifluoromethyl)phenyl]-L-serinamide	
152	N~2~-~[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-argininamide	

Table 3

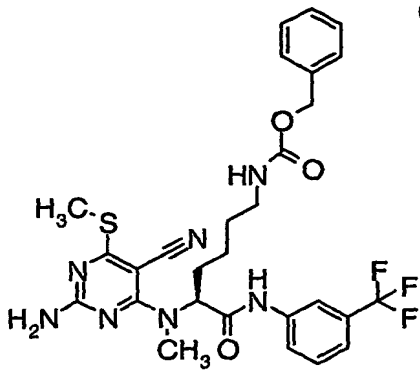
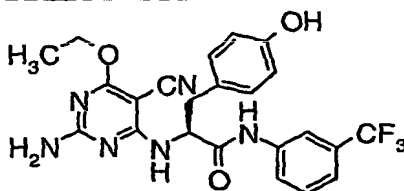
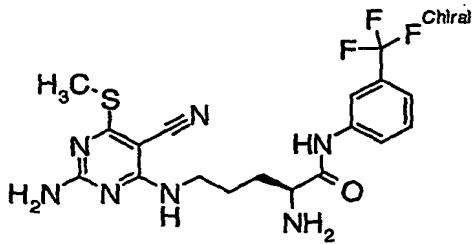
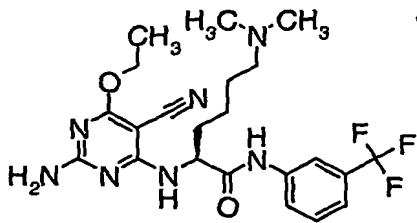
Entry	Name	Structure
153	N~2~-{2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl}-N~2~-methyl-N~6~-{[(phenylmethyl)oxy]carbonyl}-N-[3-(trifluoromethyl)phenyl]-L-lysineamide	 <p>Chiral</p>
154	N~alpha~-{2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl}-N-[3-(trifluoromethyl)phenyl]-L-tyrosineamide	 <p>Chiral</p>
155	N~5~-{2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl}-N-[3-(trifluoromethyl)phenyl]-L-ornithineamide	 <p>Chiral</p>
156	N~2~-{2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl}-N~6~,N~6~-dimethyl-N-[3-(trifluoromethyl)phenyl]-L-lysineamide	 <p>Chiral</p>

Table 3

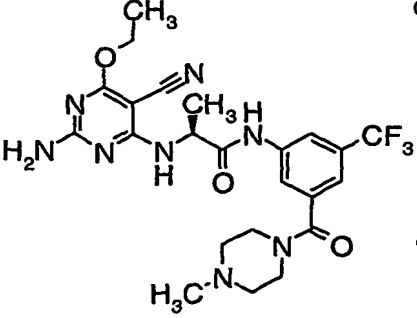
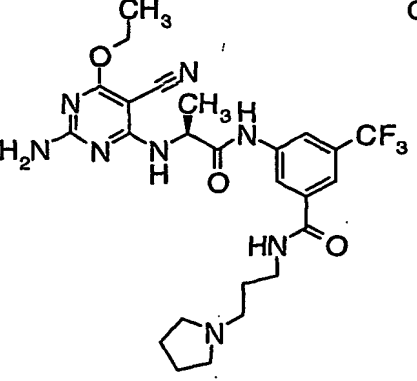
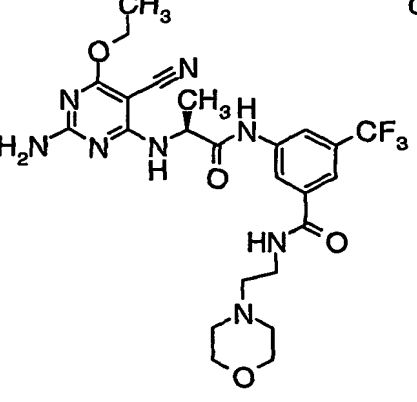
Entry	Name	Structure
157	N-2--[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N-[3-[(4-methylpiperazin-1-yl)carbonyl]-5-(trifluoromethyl)phenyl]-L-alaninamide	 <p>Chiral</p>
158	3-((N-[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-L-alanyl)amino)-N-(3-pyrrolidin-1-ylpropyl)-5-(trifluoromethyl)benzamide	 <p>Chiral</p>
159	3-((N-[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-L-alanyl)amino)-N-(2-morpholin-4-ylethyl)-5-(trifluoromethyl)benzamide	 <p>Chiral</p>

Table 3

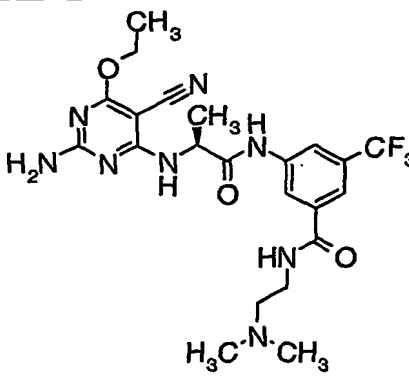
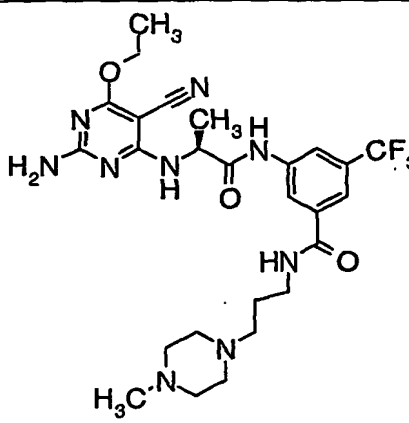
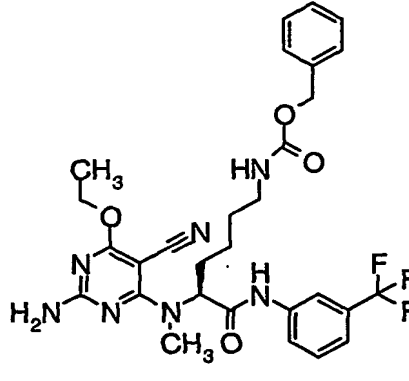
Entry	Name	Structure
160	3-((N-[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-L-alanyl)amino)-N-[2-(dimethylamino)ethyl]-5-(trifluoromethyl)benzamide	 <p>Chiral</p>
161	3-((N-[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-L-alanyl)amino)-N-[3-(4-methylpiperazin-1-yl)propyl]-5-(trifluoromethyl)benzamide	 <p>Chiral</p>
162	N-2-[[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N-2-methyl-N-6-[[[(phenylmethyl)oxy]carbonyl]-N-[3-(trifluoromethyl)phenyl]-L-lysine]amido	 <p>Chiral</p>

Table 3

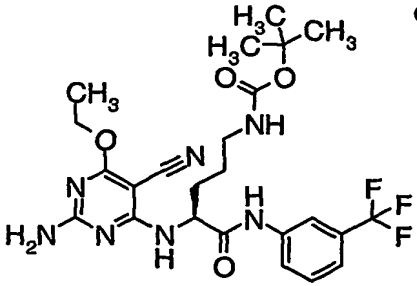
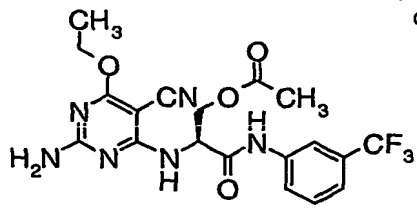
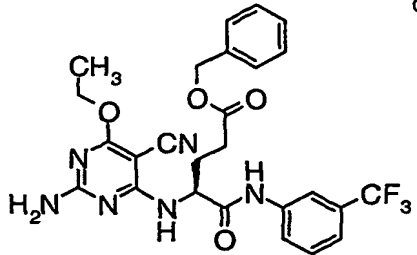
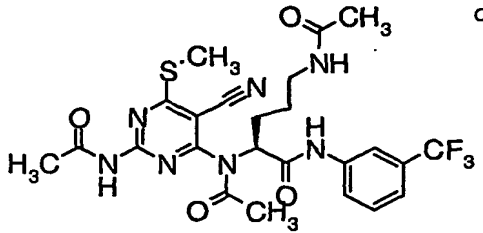
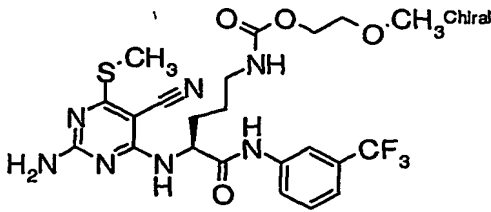
Entry	Name	Structure
163	1,1-dimethylethyl ((4S)-4-([2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]amino)-5-oxo-5-[[3-(trifluoromethyl)phenyl]amino]pentyl)carbamate	 <p>Chiral</p>
164	(2S)-2-([2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]amino)-3-oxo-3-[[3-(trifluoromethyl)phenyl]amino]propyl acetate	 <p>Chiral</p>
165	phenylmethyl N~2~-([2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-alpha-glutamate	 <p>Chiral</p>
166	N~2~,N~5~-diacetyl-N~2~-([2-(acetylamino)-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	 <p>Chiral</p>
167	2-(methyloxy)ethyl ((4S)-4-([2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]amino)-5-oxo-5-[[3-(trifluoromethyl)phenyl]amino]pentyl)carbamate	 <p>Chiral</p>

Table 3

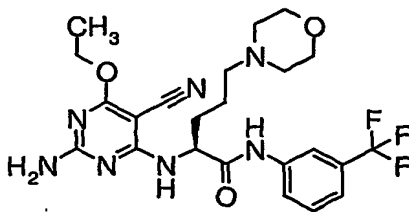
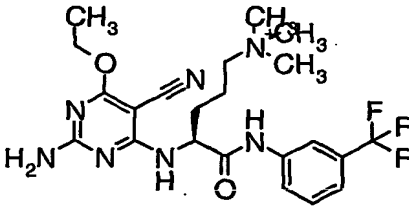
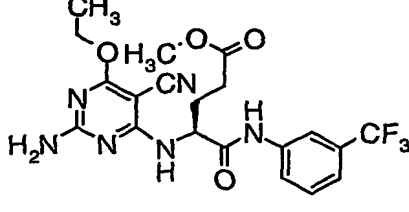
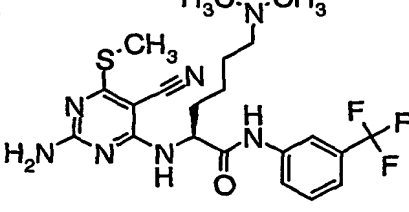
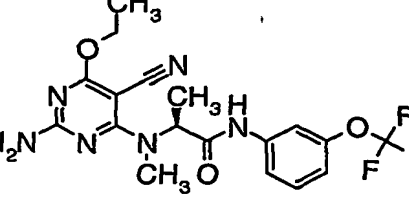
Entry	Name	Structure
168	N~2~-~[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-5-morpholin-4-yl-N-[3-(trifluoromethyl)phenyl]-L-norvalinamide	 Chiral
169	N-((4S)-4-[[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]amino]-5-oxo-5-[[3-(trifluoromethyl)phenyl]amino]pentyl)-N,N-dimethylmethanaminium	 Chiral
170	Methyl N~2~-~[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-alpha-glutamate	 Chiral
171	N~2~-~[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N~6~,N~6~-dimethyl-N-[3-(trifluoromethyl)phenyl]-L-lysineamide	 Chiral
172	N~2~-~[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N~2~-methyl-N-[3-(trifluoromethoxy)phenyl]-L-alanineamide	 Chiral



Table 3

Entry	Name	Structure
173	N~2~-{2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl}-N-[3-(trifluoromethyl)phenyl]-L-alpha-glutamine	<p>Chiral</p>
174	N~2~-{2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl}-N-(3-bromophenyl)-N~2~-methyl-L-alaninamide	<p>Chiral</p>
175	N~2~-{2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl}-N~1~-{3-(trifluoromethyl)phenyl}-L-glutamamide	<p>Chiral</p>
176	N~2~-{2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl}-3-(dimethylamino)-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	<p>Chiral</p>
177	Structure possibly contains amino acid derivative which is not supported in current version!	<p>Chiral</p>

Table 3

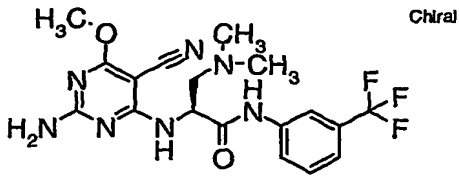
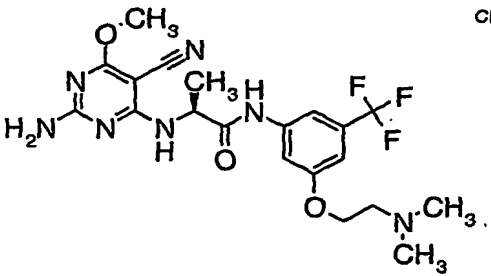
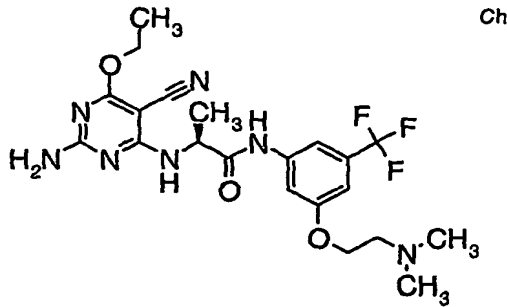
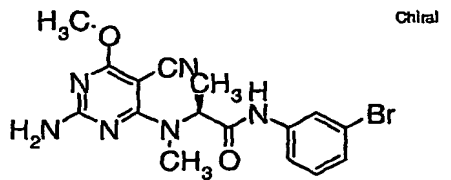
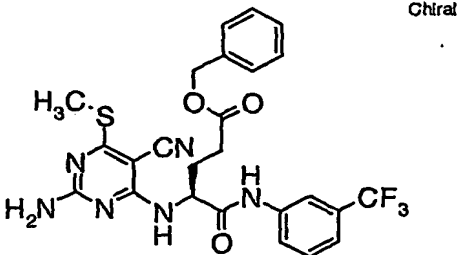
Entry	Name	Structure
178	N~2~-{2-amino-5-cyano-6-(methyloxy)pyrimidin-4-yl}-3-(dimethylamino)-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
179	N~2~-{2-amino-5-cyano-6-(methyloxy)pyrimidin-4-yl}-N-[3-[[2-(dimethylamino)ethyl]oxy]-5-(trifluoromethyl)phenyl]-L-alaninamide	
180	N~2~-{2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl}-N-[3-[[2-(dimethylamino)ethyl]oxy]-5-(trifluoromethyl)phenyl]-L-alaninamide	
181	N~2~-{2-amino-5-cyano-6-(methyloxy)pyrimidin-4-yl}-N-[3-bromophenyl]-N~2~-methyl-L-alaninamide	
182	phenylmethyl N~2~-{2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl}-N-[3-(trifluoromethyl)phenyl]-L-alpha-glutamate	

Table 3

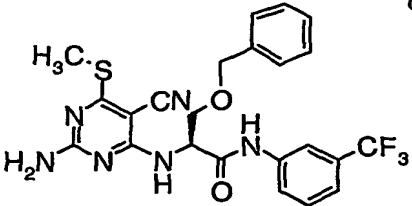
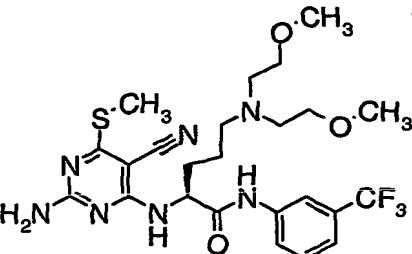
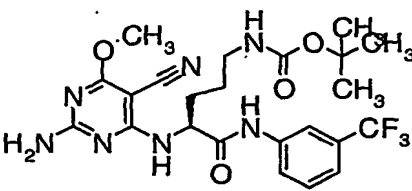
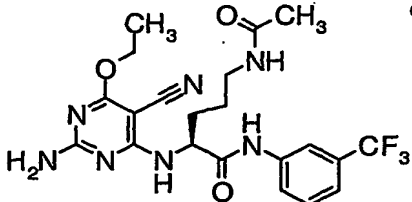
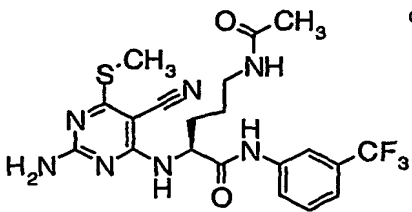
Entry	Name	Structure
183	N~2~-~[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-O-(phenylmethyl)-N-[3-(trifluoromethyl)phenyl]-L-serinamide	 Chiral
184	N~2~-~[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N~5~,N~5~-bis[2-(methyloxy)ethyl]-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	 Chiral
185	1,1-dimethylethyl ((4S)-4-([2-amino-5-cyano-6-(methyloxy)pyrimidin-4-yl]amino)-5-oxo-5-([3-(trifluoromethyl)phenyl]amino)pentyl)carbamate	 Chiral
186	N~5~-~acetyl-N~2~-~[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	 Chiral
187	N~5~-~acetyl-N~2~-~[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	 Chiral

Table 3

Entry	Name	Structure
188	N~2~-2-amino-5-cyano-6-(methyloxy)pyrimidin-4-yl]-N~2~-methyl-N-[3-[(trifluoromethyl)oxy]phenyl]-L-alaninamide	
189	methyl 3-({N-[2-amino-5-cyano-6-(methyloxy)pyrimidin-4-yl]-L-alanyl}amino)-5-(trifluoromethyl)benzoate	
190	3-({N-[2-amino-5-cyano-6-(methyloxy)pyrimidin-4-yl]-L-alanyl}amino)-N-[2-(dimethylamino)ethyl]-5-(trifluoromethyl)benzamide	
191	N~2~-2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-3-morpholin-4-yl-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
192	N~2~-2-amino-5-cyano-6-(methyloxy)pyrimidin-4-yl]-3-morpholin-4-yl-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	

Table 3

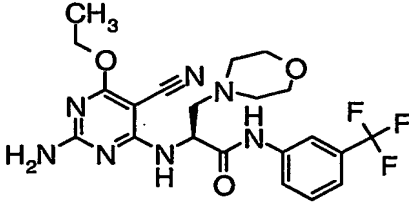
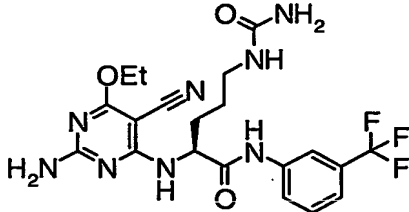
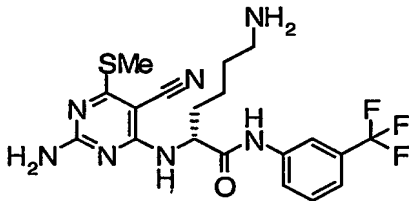
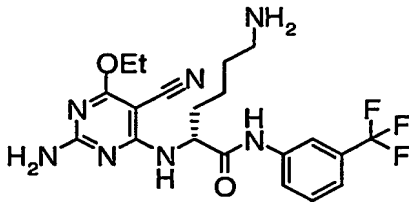
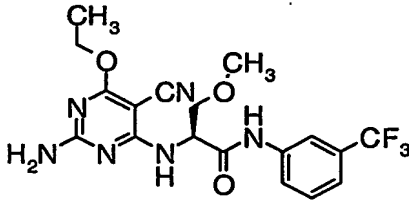
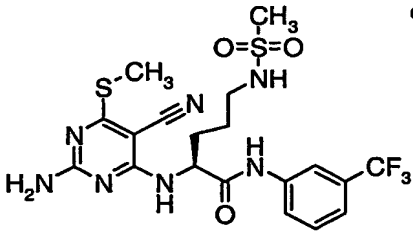
Entry	Name	Structure
193	N~2~-([2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-3-morpholin-4-yl)-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	
194	N~5~-([aminocarbonyl)-N~2~-([2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	
195	N~2~-([2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-D-lysineamide	
196	N~2~-([2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-D-lysineamide	
197	N~2~-([2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-O-methyl-N-[3-(trifluoromethyl)phenyl]-L-serinamide	

Table 3

Entry	Name	Structure
198	N~2~- [2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]-N~5~- (methylsulfonyl)-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	

35. A pharmaceutical composition comprising the compound according to any one of claims 1 - 34 and a pharmaceutically acceptable carrier.

36. A metabolite of the compound or the pharmaceutical composition according to any one of claims 1 - 35.

37. A method of modulating the *in vivo* activity of a kinase, the method comprising administering to a subject an effective amount of a composition comprising at least one of: the compound according to any of claims 1- 34, the pharmaceutical composition according to claim 35, a compound explicitly provided against in claim 1 or 21, and a pharmaceutical composition comprising a compound, the composition of which was, explicitly provided against in claim 1 or 21 and a pharmaceutically acceptable carrier.

38. The method according to claim 37, wherein the kinase is p70S6K.

39. The method according to claim 38, wherein modulating the *in vivo* activity of p70S6K comprises inhibition of p70S6K.

40. A method of treating diseases or disorders associated with uncontrolled, abnormal, and/or unwanted cellular activities, the method comprising administering, to a mammal in need thereof, a therapeutically effective amount of a composition comprising at least one of: the compound according to any of claims 1 -34, the pharmaceutical composition according to claim 35, a compound, the composition of which was, explicitly provided against in claim 1

or 21, and a pharmaceutical composition comprising a compound, the composition of which was, explicitly provided against in claim 1 or 21 and a pharmaceutically acceptable carrier.

41. A method of screening for modulator of a p70S6 kinase, the method comprising combining either a compound according to any one of claims 1 - 34 or a compound, the composition of which was, explicitly provided against in claim 1 or 21, and at least one candidate agent and determining the effect of the candidate agent on the activity of said kinase.

42. A method of inhibiting proliferative activity in a cell, the method comprising administering an effective amount of: the compound according to any of claims 1 - 34, the pharmaceutical composition according to claim 35, a compound, the composition of which was, explicitly provided against in claim 1 or 21, and a pharmaceutical composition comprising a compound, the composition of which was, explicitly provided against in claim 1 or 21 and a pharmaceutically acceptable carrier.

43. A method of inhibiting abnormal metabolic activity in a cell, the method comprising administering an effective amount of: the compound according to any of claims 1 - 34, the pharmaceutical composition according to claim 35, a compound, the composition of which was, explicitly provided against in claim 1 or 21, and a pharmaceutical composition comprising a compound, the composition of which was, explicitly provided against in claim 1 or 21 and a pharmaceutically acceptable carrier.